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ABSTRACT

The primary objective of this report is to provide useful information to community colleges making decisions about beginning or improving online access to information. The report provides conference highlights, including summaries of the keynote address by Anne Caputo of Dialog Information Services, several short talks on community colleges and online searching, and a panel discussion on paying for online search services. The full text of papers prepared by presenters at the conference are also given: "Chemistry Students 'Do It by Self' Database Searching" (Lillian Berg); "Online Literature Searching at J. Sargeant Reynolds" (Timothy Williams); "The Long Road to the First Online Database Search" (Pat Thomas); "Paying for Online Services at Virginia Western Community College" (John Welch); "Online Searching: A Short Course" (Cathy Sabol); "End User Services and Training in the Academic Environment" (Christina A. Brundage); and "The Right Modem" (Paul Parker). Appendices include conference resolutions, vendor services demonstrated at the conference, vendors sending multiple copies of literature, the conference program, and a list of community colleges represented at the conference. (THC)

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VIRGINIA CONFERENCE ON ONLINE SEARCHING IN COMMUNITY COLLEGES

25 March 1986

**Northern Virginia Community College
Annandale Campus**



Funded by:

**The Virginia Community College Institute
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VIRGINIA CONFERENCE ON ONLINE SEARCHING
IN COMMUNITY COLLEGES

25 MARCH 1986

Northern Virginia Community College
Annandale Campus

SUMMARY REPORT

Edited by Frances Bernhardt and Kathy Jordan

Annandale, Va., 1986

PREFACE

Virginia is a large state and some of its community colleges are hundreds of miles away from Annandale, Virginia, the location of this conference. As soon as we began planning the conference we realized that not all Virginia Community Colleges would be represented, so we decided to prepare a report which would give the highlights of the proceedings and also contain papers prepared by presenters at the conference. The primary objective of this report is to provide useful information to community colleges that are making decisions relative to beginning or improving online access to information.

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INTRODUCTION

Excellence in teaching and learning cannot be achieved without adequate access to information. Computer technology is revolutionizing the ways in which information is produced, distributed, and retrieved for use. Thousands of bibliographic, full-text, and statistical databases can now be accessed online. Because librarians and other Learning Resource Center staff of the Virginia Community College System want to help teachers, students, and staff obtain all of the information they need to teach and learn successfully, they are interested in exploring the contributions that online search services can make to excellent library service.

In addition to supporting all of the instructional programs of their colleges, community college libraries participate directly in the instructional process. Bibliographic instruction consists of teaching students, and sometimes faculty and staff, how to locate and use information and materials. While in college, students need to know how to find information for assigned papers and other class assignments and as they go out into the world, many of them will still need to search for information for job-related or

personal needs. The traditional methods of finding information such as library card catalogs and printed indexes are being supplemented and sometimes even supplanted by online computer access. We may not be adequately preparing our students for the future if we do not at least introduce them to the new technology.

Some VCCS libraries are already providing access to information databases through services such as DIALOG, BRS/AFTER DARK, and WILSONLINE; other libraries are in the planning or implementation stage. Some libraries, however, have not been able to overcome obstacles to moving forward. Community college libraries face particular problems when they try to offer online search services to faculty and students. How does one obtain funding to provide this service? Who pays the online search costs? What is the best equipment to use? Can a small library with only one or two librarians provide this service? One of the purposes of this conference was to give librarians and other VCCS personnel a chance to share in-system expertise, innovative projects, and solutions to common problems. It was also hoped that this conference would contribute to instructional excellence at VCCS colleges by leading to increased awareness within our institutions of the possibilities of computer access to information and specifically by helping VCCS libraries move forward with the provision of online information services.

CONFERENCE HIGHLIGHTS

Over seventy librarians and other community college personnel with an interest in online searching assembled between 8:30 and 9:00 A.M. for a very full day of speeches, short talks, lunch, a panel discussion, online search demonstrations, and an opportunity to fill a bag with online search information handouts.

In the section that follows, the editors have summarized major events of the conference.

KEYNOTE ADDRESS: ANNE CAPUTO, DIALOG INFORMATION SERVICES

One highlight of the conference was the keynote address given by Anne Caputo of DIALOG Information Services. Ms. Caputo is Project Manager for DIALOG Educational Services which provides access via the Classroom Instruction Program to curriculum materials and special support services to those teaching DIALOG search skills to students from kindergarten through graduate school. In addition, she functions as a Senior Trainer for DIALOG where she has been responsible for training new and experienced users since 1976. Ms. Caputo is also an Adjunct Assistant Professor of Library and Information Science at the Catholic University of America where she teaches basic and advanced online search courses and conducts a two week intensive Online Workshop each August aimed at teaching techniques for online instructors.

Why should we do online searching?

Because it is:

1. Fast
2. Cost-effective (employee time must be considered).
3. A powerful way to manipulate words, concepts, and relationships.
4. Comprehensive access to a vast store of information even for small libraries.
5. A lot of fun (Beware, people get hooked on it!).

GROWTH IN ONLINE SEARCHING

Statistics on the number of online searches illustrate the amazingly fast growth of this means of accessing information:

<u>Year</u>	<u>Number of Searches Conducted</u>
1975	1 million
1980	6.5 million
1985	40 million

There are now about 700,000 online customers and about 2,600 databases; however, some of the databases are small and specialized.

Types of databases include:

- | | | |
|---------------|---|---|
| Bibliographic | - | which refer to sources of information. |
| Directory | - | which provide information on people, companies, industry rankings, etc. |

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- Numeric - which provide factual numeric data such as demographic and statistical databases.
- Full-text - which contain either text of magazines or reference sources, or electronic publishing where there is no print copy.

TWO KINDS OF ONLINE SYSTEMS

Command Driven: These are faster and more powerful, but the user must know the commands.

Menu Driven: Such systems do not require prior training, but they take longer (connect time costs may be lower, however). They are useful for new searchers and infrequent users.

EXAMPLES OF ONLINE SEARCHES

Ms. Caputo next gave some actual examples of online searches that were able to quickly do what manual searching could not have easily done. These sample search requests were:

1. Locate information on a recent microelectronics conference dealing with voice systems without knowing the name, date, or place of the conference.
2. Determine whether "Big Orange" has been used as a trademark name for athletic equipment.
3. List all the female graduates of Old Dominion University who are listed in Who's Who.

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4. Identify the person who said that if they were President they would not appoint a woman as U.S. ambassador to the United Nations.
5. Is the camel population of Saudi Arabia declining or growing?

The speaker now demonstrated how all four types of databases could be used to answer these inquiries.

SOME REASONS FOR ONLINE SEARCHING

1. With full-text databases, one can search and display the actual text of newspapers, encyclopedias, textbooks, and other materials.
2. With value added services, one can derive mailing lists, mailing labels, and graphics.
3. With gateway systems and networking, one can enter one online system and through a gateway go to another service. Example: From DIALOG to systems that will allow one to make reservations and order tickets.
4. With downloading and post-processing, one can use microcomputers to create and edit bibliographies and to personalize information. (Copyright exclusions and requirements must be taken into consideration.)

GETTING STARTED WITH ONLINE SEARCHING

Major start-up considerations include:

1. Choose a vendor. It is often advisable to start with just one service.
2. Decide on equipment and software. Microcomputers are more versatile than "dumb" terminals.
3. Decide on the site for your online searching. Will it be located in a public or private area?
4. Obtain staff training. It is often wise to train a wide variety of people because people who do not do searching themselves may still be referring patrons to online searching.
5. Obtain thesauri and other search aids.

COSTS OF ONLINE SEARCHING

Three kinds of costs:

1. Start-up costs -- equipment, training, supplies, etc.
2. Ongoing costs -- paper, maintenance of equipment, additional training, search aids, practice time.
3. Spinoff costs -- additional interlibrary loan and acquisitions may be generated.

SOME ONLINE ISSUES AND IDEAS

1. Choose your microcomputer intelligently considering what uses you plan to make of it.
2. The trend is to user friendly systems.

3. Copyright rules are not entirely clear at present. Generally, electronic information is protected by the same copyright laws as printed material.

4. Emerging technologies are:

Intelligent gateways

Value added services

CD-ROM (Compact disk/read only
memory)

With these disks, it is possible to search without connect charges. They are very high density. The card catalog of the Library of Congress could be put on two disks.

CONCLUSION

Online searching is just another tool to help you do your job better. It is not dramatically different from other reference tools. Use it when appropriate, but also use other techniques when they are appropriate. Our goal should be to provide the connection between the information need and the information answer.

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QUESTIONS AND DISCUSSION

The first question asked whether the present trend was in two directions, one to user friendly systems and the home market and one to use of CD-ROM disks. Anne Caputo said these were not necessarily opposite directions because CD-ROM equipment may become far less costly than at present, so that it will be purchased even for home use. She said standards for CD-ROM are an important issue and consensus has not yet developed. Another question was whether it was advisable to buy CD-ROM equipment now or to wait for "write" capability. She advised waiting.

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SHORT TALKS: COMMUNITY COLLEGES AND ONLINE
SEARCHING

DR. GLORIA TERWILLIGER, NVCC, ALEXANDRIA CAMPUS

The next section of the Conference brought the topic of online searching to the community college context where there are limits (financial and other) to what can be done. It was anticipated that this session might be like coming down off the mountaintop to reality. However, the first presenter, Dr. Gloria Terwilliger, began with an inspiring historical discussion. Her text was John G. Kemeny's "Library for 2000 A.D.," a lecture delivered in celebration of M.I.T.'s Centennial Year, 1961. Kemeny's futurism was remarkably prescient, particularly the process he sketched for subject searching by computers.

Dr. Terwilliger then described how the Alexandria Campus began online searching in 1983 by using a Decwriter and modem obtained from the Business Division and using the low cost after-dark service, Knowledge Index. Because of complications relating to state approval of online search service at that time, payment was made by a special "dedicated" credit card, using funds in the library's NVCC Educational Foundation account obtained from book sales and donations. Librarians quickly learned basic search techniques and later took classes in online searching. Within a year the library had significantly expanded its search services by subscribing to DIALOG.

Editors' note: All five campus libraries of Northern Virginia Community College now do online searching. The services used and the methods of paying for the services vary. In 1984/85 a total of 339 searches were done, including many searches for students as well as faculty and staff.

LILLIAN BERG, NVCC ANNANDALE, CHEMISTRY DEPARTMENT

Lillian Berg's chemistry students have been doing online searching for over five years. Her organic chemistry students choose a topic, search by means of online databases, visit various local research libraries, write a paper, and present the paper to high school students or other groups. The partial list of topics that she showed us was particularly interesting, revealing many controversial and timely topics.

DIALOG's \$15.00 an hour special classroom service rate is used. Lillian Berg also said that online searching is fun and that it is easy to get hooked on it. For more details, see Lillian Berg's paper on page 25 .

TIMOTHY WILLIAMS, J. SARGEANT REYNOLDS COMMUNITY COLLEGE

The many librarians and other conference attendees from Northern Virginia Community College had been looking forward to hearing the experiences of other community colleges. Timothy Williams mentioned staff size as a problem for small community colleges initiating a new service such as online searching. He also spoke about problems in

getting the DIALOG contract approved by the State Attorney General and the need for searchers to develop skills by frequent searching. See page 28 for his paper about online searching at J. Sargeant Reynolds.

PAT THOMAS AND CAROLYN HUGHES, TIDEWATER COMMUNITY COLLEGE

One of the speakers pointed out that because of their limited funds, community college libraries often give budgetary emphasis to library collections and services which meet the routine information needs of students; through online searching libraries can meet the special, even esoteric, information needs that occasionally occur.

A quick, successful search on the topic, docudrama, was described. The importance of availability of full text when the library does not have the source publication was mentioned.

An account of the beginning of online search services at the Chesapeake Campus of Tidewater Community College is given in a paper on page 32 .

CONCURRENT AFTERNOON SESSIONS

After a break for a buffet luncheon in the Annandale Campus Faculty/Staff Dining Room, the conference resumed with two concurrent sessions. Cathy Sabol presented "A Short Course on Online Searching" in one room while a panel discussion on paying for online search services was held in another room. The short course was an excellent

presentation of the basics of online searching but will not be summarized here because it is described in a paper beginning on page 40. The panel discussion began with calm, informative statements by each of the four panelists but became a very lively discussion. It quickly became apparent that paying for online searching is a problem for many community college libraries and that although there have been innovative approaches to the problem, there are differing outlooks and opinions on a variety of questions. Since the panel discussion drew forth both interesting ideas and differing opinions it will be reported in detail.

PAYING FOR ONLINE SEARCH SERVICES: A PANEL DISCUSSION

Peggy Cocke, the discussion moderator, introduced the topic by saying that when a library considers online searching, deciding how to pay for online services is a question second in importance only to the question of how best to serve one's students, faculty, and community. The four panelists then made their statements.

JOHN WELCH, VIRGINIA WESTERN COMMUNITY COLLEGE

Virginia Western Community College Library was able to begin DIALOG searching in 1981 by stating that there would be no cost to the College. The people for whom the searches were done would pay for the searches. Training was absorbed in the professional development budget; search aids were also paid for elsewhere in the budget. Equipment

for searching was already available. When there was a problem with payment by people outside the college, an additional password was obtained and these patrons paid directly.

Mr. Welch drew many laughs when he said they eventually came up with a policy they "could go public with." Faculty searches are now paid from departmental budgets. The library no longer searches for community patrons, but this need is now met by other services in the community. Individual DIALOG accounts will be opened for nursing students and other students who need online search services. For more details, see Mr. Welch's paper on page 36.

DR. GEN SEN CHU, NVCC, ALEXANDRIA CAMPUS

The Alexandria Campus of Northern Virginia Community College was able to begin online searching because of funds raised from library book sales and held in a special account with the NVCC Educational Foundation. About \$400 is raised at a typical book sale.

DIALOG's Knowledge Index was chosen as a service because:

1. Cost is low even if one "goofs up."
2. It contains a useful collection of databases.

Decwriter terminals and modems were obtained from elsewhere on campus at no cost to the library. At the beginning, a special Master Charge

card was used for Knowledge Index charges. Bills were paid from NVCC Foundation funds. However, costs are now paid from the regular library budget under 410CS. Money paid for online searches is deposited in this account; about 20% of online search costs are recovered by charges.

Charging policy:

Searches for faculty related to coursework or other College work are free.

Searches for faculty for their own studies or other personal reasons are paid by the faculty.

Most student searches are short and inexpensive; they are seldom charged.

Community patrons pay direct costs.

In the first ten months of searching, Alexandria Campus did 139 searches at a total cost of \$352.00, for an average cost of \$2.53 per search

For a community college library to begin online searching it takes commitment, but not necessarily a lot of money.

TINA BRUNDAGE, GEORGE MASON UNIVERSITY

Tina Brundage decided to approach the topic in a different way since she didn't want to give the appearance of telling community college librarians how to run their show. After beginning work at George Mason University, where online searching was an already established service, she discovered that even in a fairly luxurious search environment one must watch costs. Students pay a flat rate of

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\$5.00 for searches of up to 50 citations; faculty members pay the full cost but usually pay from grant or departmental budgets, not from personal funds.

TINA'S TIPS FOR CUTTING SEARCH COSTS

1. Take the training. Shortcuts taught at training sessions save money. Write down what you learn. Some databases such as BIOSIS and Psychological Abstracts offer free training. Even training sessions that cost money are worthwhile.
2. Practice. Use "Ontap" databases for practice. You must search often to become good at it.
3. Join an online search group or form one of your own. Talk to other searchers.
4. Read Online magazine or other professional literature.
5. Use the thesauri and documentation. They cost money initially but will save money in the long run.
6. Call DIALOG, BRS, BIOSIS, etc. for search suggestions and assistance. Usually there is no charge.
7. Prepare well for your searches; preparation cuts online search costs.

In addition to a possible increase in interlibrary loans, spinoff costs can include practice searches, preliminary searches, and demonstrations for bibliographic instruction.

Costs for these can not be recovered.

Tina Brundage ended with a plug for subsidized (or free) searches for students. We have a responsibility to give students access to information.

DON HAYES, NVCC, LOUDOUN CAMPUS

Don Hayes began by saying that compared to a poor church mouse, his library was poor. His library had to figure out a way to offer online service, meet student and faculty needs, and protect themselves. After having the DIALOG contract approved via the State Attorney General route, he realized he might be personally responsible if a check would bounce or should other problems occur.

Loudoun set the base charge at \$15.00 per search based on anticipated average cost. Hidden costs are equipment maintenance, theft (Loudoun Campus had several cases of theft and equipment problems), software updates, publicity, and the possibility of bounced checks or department transfers not completed due to insufficient funds. Such costs could not be absorbed in the budget since there was no money available. The charge does limit the number of searches.

However, help was obtained from faculty, departments, and the Provost (who paid a repair bill).

The importance of keeping an accurate search log and checking it carefully against bills was

stressed. Log-on costs and costs between searches must somehow be covered.

A positive point is that they do like online searching. Online searching should be funded by the state; it was suggested that we push for a separate rational for funding of online searching and a separate line item in the budget other than 410. Also libraries need to push for funding for CD-ROM and other new technology.

QUESTIONS AND COMMENTS

Ideas brought forth by the panel raised many questions. Discussion was very lively at times and flowed quickly from one topic to another. The general topics of discussion were:

1. John Welch's plan to have students obtain their own passwords was questioned. Someone wondered about the feasibility of getting 5,000 to 10,000 passwords. Passwords however, would not be for all students; it would begin with just students in the nursing program.
2. A question was raised as to searching policy at Northern Virginia Community College. Did each of the five campuses just do their own thing? In response, the uniform policy of the NVCC libraries was quoted. The basic policy is to charge online search costs, but certain type of searches

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may be paid for by the library if funds are available: demonstration searches, practice searches, searches for college administrative support, ready-reference search, searches that are part of a program of bibliographic instruction, and short exploratory searches. Don Hayes explained that it was not that he liked to charge, but that he had no money in the budget that could be used for searching. Unlike some other campuses, he did not have money from book sales or from the student government. A question was raised about students going from one campus library to another trying to find the best deal. Because of distance this has not been much of a problem.

3. A basic theme reiterated in many of the comments was that librarians need to educate and lobby the administrators at their colleges. Administrators may see traditional library services as appropriately given free of charge, but think that a "new" service such as online service should be charged to the users. Why should online searching be charged when 98% of library services are given

free? Is it because a charge appears on the computer printout at the end of a search? Online searching is not all that new. It has been around for at least 15 years. It is just another way of accessing information. Search costs should be built into library budgets. State funding is needed. Many colleges are spending large sums on microcomputers and high technology. Online searching should be seen as part of new technology's scope.

4. The panel moderator raised a question about the effect of online searching on interlibrary loans. Someone commented that CAVALIR had increased the need for interlibrary loans much more than online searching. It was mentioned that some areas of the state had richer local library resources than others. A related question of who pays for interlibrary loan costs was raised and discussed. A librarian who works with both online searching and interlibrary loan said that the increase in interlibrary loan requests at her library was not due primarily to online searching. She also said that selecting for searching those

databases which the library could support with its resources meant that students could usually find some of the materials in the library and that was all they expected.

5. The need for staff training and continuing development of search skills was emphasized. Perhaps a special professional development project could be funded from available grant sources.
6. The question of librarian versus end user searching received a few comments. End user searching may cost more because of the lack of training and experience of the user. However, if the librarian does the searching it is helpful for the requestor to give the searcher background information and advice.
7. There is a need for libraries to keep up with available technology and to be able to assist faculty and others as they use new technology to access information, whether at home or in the library. Online searching should be part of bibliographic instruction. If actual instruction in searching is not offered, then students should at least

be familiarized with what online searching is and its possible uses.

8. An example was given of a quick inexpensive ready reference search.

Sometimes online searching is the least costly and most effective means of answering a question. These searches should appropriately be paid from library funds.

There were times in the discussion when there seemed to be some disagreement on how to pay for online searching, but most of the differences in opinion had their root in present lack of sufficient funds for online searching at our community colleges. Given a situation in which librarians saw that something should be done and yet there was no money with which to do it the approaches to the situation varied from one library to another. Perhaps the truly remarkable fact is that we have come as far as we have with very little support from our colleges. Some of us anticipate receiving more support in the future and then we will be even better able to meet the information needs of our students and faculty.

Dr. Gloria Terwilliger introduced two resolutions which are given on page 64. We need to work together to achieve these and other objectives.

INFORMATION POTPOURRI

From 3:00 to 4:30, a variety of conference activities occurred simultaneously. Librarians demonstrated five online search services (DIALOG, BRS/After Dark, Knowledge Index, Wilsonline, and Wilsearch) to small groups. Both a Decwriter II terminal and a Columbia Microcomputer were used. See page 65 for more information on the services demonstrated. Tina Brundage made a special presentation on end user training (see page 51) and Paul Parker made a presentation on equipment and technical problems (see page 57).

Multiple copies of a variety of brochures, folders and other handouts, obtained by Ellie England of NVCC Woodbridge Campus, were available in the Reference Room of the library (see list on page 67) and conference attendees were invited to take home a bagfull of online search information.

In addition, everyone was invited to visit the LRC Microcomputer Laboratory where an ERIC Microsearch disk on Library Instruction was available for anyone who was interested.

The conference ended with many people turning their thoughts from the excitement of online searching to the problem of fighting Washington rush hour traffic on the way home. Suddenly the crowd thinned out.

One conference attendee who conscientiously completed his evaluation form indicated that there wasn't enough time for any part of the program, but he also said that he felt that the entire conference was both informative and interesting. We did try to crowd a lot into one day, but we wanted to make the trip worthwhile for out of town visitors and the day a busy and informative one for our NVCC attendees.

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Chemistry Students "Do It By Self"
Database Searching

By

Lillian Berg

Lillian Berg is a faculty member of the Chemistry Program at Annandale Campus, Northern Virginia Community College. What she calls "do it by self" searching is more commonly called "end user" searching; however, Ms. Berg was involved with this type of searching before "end user" became a part of our jargon. Her presentation to the conference reminded us that it is not only librarians who have an interest in online searching. Her paper briefly describes her innovative program for introducing chemistry students to database searching. A copy of her worksheet for students is included.

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CHEMISTRY STUDENTS 'DO IT BY SELF' DATABASE SEARCHING

DATABASE SEARCHING IS FUN!!! For the past five years, we have been using the DIALOG databases for literature searches for both faculty and students. The Organic Chemistry students are required to research a science topic of interest and then followup with some laboratory experiments, write a paper on the subject and finally present their findings to their classmates, nearby high school science classes, and/or chemistry meetings.

A limited number of databases are available to the student: ERIC, Educational Resources Information Center; NTIS, National Technical Information Service; COMPENDEX, Engineering Index; AGRICOLA, National Agricultural Library; EXCEPTIONAL CHILD EDUCATION ABSTRACTS; and ONTAP CHEM ABSTRACTS CONDENSATES and ONTAP CHEMNAME. Even with this limited number of databases, the student is able to find enough information in approximately 15-30 minutes to narrow the field of inquiry substantially. A printout of references and abstracts is obtained which can be taken to a local university or the Library of Congress to find the appropriate reference in full documentation.

A DIGITAL DECWRITER II is used with an appropriate modem for telephone transmission of information from the DIALOG databases. After the sign-on procedure is conducted by the instructor, the student begins his search of the most suitable databases following a very simple set of commands. Begin 6, for instance, connects the user to File 6, NTIS, where the students Selects TOPICS which can then be Combined with each other to narrow the field of inquiry. Although the descriptors are pre-decided, there is ample opportunity while the student is at the terminal to incorporate new ideas into the search.

Database searching is indeed an exciting way to find new information and a 'painless' way to respond to students who may never have had an opportunity to 'talk' with a computer. DATABASE SEARCHING IS FUN!!!

PROCEDURE AT TERMINAL

The instructor will connect the terminal "on-line". Hence you should be ready to start searching a previously determined database for your first topic.

You type a command	Then type	Function of the command
BEGIN FILE _____ (Choose 1, 6, 8, 9, 10, 54)	RETURN	BEGIN (1) Starts time clock for charges (2) Provides access to File _____ (3) Erases all previous results
Note: BEGIN may be typed B		
SELECT _____ (your topic)	RETURN	SELECT makes topic ready for search
Note: SELECT may be typed S		
COMBINE _____	RETURN	COMBINE descriptors: to broaden, use OR (+); to narrow, use AND (*); to limit, use NOT (-).
Note: COMBINE may be typed C		
Set numbers are used for combining		
TYPE _____ Set/Format/Range	RETURN	Set is desired list number Format length desired: 2, short; 5, long Range # references
SEARCH TOPICS	DESCRIPTORS (SYNONYMS)	DATABASE(S)
1. _____	1. _____	1. _____
2. _____	2. _____	2. _____
3. _____	3. _____	3. _____

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Online Literature Searching at
J. Sargeant Reynolds Community College

By

Timothy Williams

Timothy Williams is a Reference Librarian at the Parham Road Campus of J. Sargeant Reynolds Community College. His discussion of the introduction of online searching at his community college includes a list of five questions which were considered before a commitment to online literature searching was made. He also discusses other aspects of beginning online searching--particularly the costs and how they are paid.

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J. Sargeant Reynolds is a multi-campus institution, with a Downtown Campus serving approximately 1,500 FTE's with approximately 60 full-time faculty, the Parham Road Campus serving approximately 2,400 FTE's with 75 full-time faculty, and a Western (Goochland) Campus serving 100 FTE with about 7 faculty. Each campus has an autonomous LRC, with Western getting professional advice and assistance from the Parham Road Campus. Therefore, the public services staffs of the two large campus libraries, i.e., 5 professional librarians, must serve over 140 full-time faculty and about 4,000 FTE's or 10,000 headcount with bibliographic services. Therefore, up to this time we've made little effort to market computerized literature searching to either our faculty or to our students. What has been done is to develop basic policies and procedures for handling selected searches from our faculty and our Administration. Before any decision was made to contract with a database vendor, several questions had to be asked and answered. Foremost, the Parham Campus LRC Director asked the Downtown Campus LRC Director if literature searching was a service that should be offered at that time to the Downtown Campus faculty or students. It was determined that not enough interest had been expressed in computerized database searching for development of a college-wide service. The Parham Campus LRC Director asked the following five questions, the answers to which led to a commitment to literature searching at the Parham Campus.

1. Was literature searching offered cost effectively by a local broker or vendor?

No one in the area allowed our faculty or students to pay for the service.

2. Did the campus LRC have the necessary hardware with which to search -- a microcomputer, an acoustic coupler, a monitor, and a printer?

Yes; the LRC had purchased most of the above components and a moveable cart to be used in DAPR classes and in Continuing Education classes, and, whenever not in classroom use, the micro was available to be scheduled for individual or LRC use.

3. Was it discerned or anticipated that members of our academic community could and would utilize the service?

Yes; many faculty were retraining, involved in advanced degree research, conducting funded research, or responsible for institutional research.

4. Did the campus LRC have sufficient staff to be trained in order to develop competence in searching?

Yes; the LRC Director had considerable microcomputer and database searching expertise, the Coordinator of Library Services was an interested novice, and the Reference Librarian had some experience in library school and some background and experience from a previous job.

5. Was there sufficient funds in the LRC's administrative budget to underwrite the entire costs of all training sessions and actual searches?

Yes; additional money was immediately available and funds for the following year could be written in, until decision was reached concerning "fee or free."

The Parham Campus commitment to literature searching was met through contracting with Bibliographic Retrieval Service (BRS.) BRS offered access to nearly all of the databases available and to all of those necessary to meet the anticipated need of our faculty. Because we were underwriting all costs and because we had decided that it would be unfair

to do a literature search only for selected students, only faculty requests for searches were entertained. In the two years that we used BRS, about 20 faculty members, through 45 searches, were served by our service. We publicized the service through an open-house demonstration at the beginning of the academic year, and through campus newsletters and memos. We charged about \$450 to our administrative account during this time, in addition to the subscription, contractual fees.

The Downtown Campus then perceived a similar need for information retrieval, and, after comparison between the major supplies, DIALOG was selected. Because DIALOG offered a standard open contract--you pay for what you use--we decided to enter into contract with them. For almost a year the contract was moved through the administrative channels outside of our institution until, finally, after some changes, the state accountants and information systems personnel were satisfied with the language and arrangement, so that the college could offer literature searching through DIALOG. The two Coordinators of Library Services met to develop alike Search Request Forms, worked with our College Accounting Office to develop Charge forms and Payment forms and procedures, and developed a brochure to be sent to the faculty advertising the service. All online and offline costs are the responsibility of the faculty member, who can get approval from the Division Chair for payment from the Division's administrative account, or from that faculty member's faculty development amount, or from a Campus or College special account, or out-of pocket. As was stated earlier, because of staffing levels and other automation projects, no great effort to publicize or evaluate the service was made. Using only the intensive one-day training session at DIALOG's Washington office, the three primary searchers have developed an elementary ability to meet the faculty members' needs. Only through continued training and use will those rudimentary skills be honed.

The Long Road to the First Online Database Search

By

Pat Thomas

Pat Thomas is Director of Learning Resources at the Chesapeake Campus of Tidewater Community College. She discusses many aspects of the implementation of online database searching, including staff training, opening accounts with database brokers, purchasing paper documentation and thesauri, and payment of search costs.

THE LONG ROAD TO THE FIRST ON-LINE DATABASE SEARCH

Once the mental commitment had been made to proceed with the introduction of on-line database searching, the process of implementation took about eight months for the Chesapeake Campus of Tidewater Community College, the first of the three campuses to do so. Of greatest concern was selecting the appropriate database services and arranging for training of the LRC staff. The LRC Director attended a one day workshop at Drexel University, designed for information managers, that reviewed available database brokers and their costs in a morning session, and basic DIALOG search techniques in an afternoon session. Based on the knowledge gained from that workshop initial services were selected. DIALOG and Wilsonline were first choices: Wilsonline because it seemed to be a natural extension of the paper indexes that had been used for years, and DIALOG because of the variety of the databases. Contracts were prepared, reviewed by the Attorney General's office (a requirement of our procurement office), and signed by the college. The administrative paper work consumed about three months.

Once the accounts had been established, reference staff members were sent to both Wilsonline and DIALOG training sessions. At that time Wilsonline was not available in the Tidewater area, so a trip to Richmond was necessary. Our Virginia Beach Campus became a DIALOG training site (something to consider), so this was very convenient for our staff. As a

result of the DIALOG training, the basic DIALOG documentation for all databases as well as thesauri and guides for selected databases were purchased. For the development of good searching techniques and for good clean searches, this expense is almost mandatory. About \$600.00 was spent for paper documentation. Equipment needs were minimal. The library owned a microcomputer and printer, so all that was needed was a modem. That was ordered and installed by a sympathetic data processing faculty member.

At this stage in the process, the staff was ready to establish guidelines for use. It was decided that all searching would be done by library staff members after an interview. Searching for students is at the discretion of the staff member. It was clearly decided that searching would not be done as a mere convenience. (One section of our search request form addresses paper sources previously consulted.) Currently all requests from faculty and staff are searched.

Cost of course is of major concern when searching. During the 1985-86 budgeting process, \$2000.00 was included as a line item in 413 for searching costs. A proposal has been forwarded to the President's staff that charges for off-line prints be paid by departmental transfers or personal funds. The same proposal suggests that the community pay all charges. A surcharge for professional time has not been included. A response has not yet been received by the LRC. In the meantime the staff is searching and printing until the funds are depleted.

It is with great pleasure that the LRC staff has been able to satisfy both the esoteric request as well as the ordinary. In the past nine months that the LRC has been offering limited searching services, it has been able to satisfy requests for information on the green peach aphid, the temperance movement in the South, as well as safety practices for auto mechanics all within a reasonable amount of time, and as a result of on-line searching.

NOTE: The Chesapeake Campus is the smallest of the three Tidewater campuses. The staff consists of the Director, a librarian and two clerks. The book collection is approximately 32,000 volumes with a book and periodicals budget of \$50,000 (1985-86)

Paying for Online Search Services at
Virginia Western Community College

By

John Welch

John Welch is a Reference Librarian at Virginia Western Community College. His library was one of the first community college libraries to offer online bibliographic services, and may even have been the first in Virginia. The author discusses methods of paying for online costs and demonstrates that creativity and innovative approaches can overcome the adversity of inadequate funding.

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"Paying for Online Services at Virginia Western Community College"

by

John Welch, Reference Librarian

Online bibliographic reference services began at Virginia Western Community College in the spring of 1981. At that time there were only a few other colleges of our size and mission where online bibliographic services were routinely offered as a part of general reference services. Our vision at that time was to incorporate online bibliographic searching as a reference tool much the same as other reference tools. Unfortunately, the cost of online searching has for the most part prohibited us from allowing online searching to be used in the way originally conceived.

The present policy for these services only allows for faculty members to make free use of these services for classroom related projects. The concept, "classroom related project," is not narrowly defined and, for the most part, the individual faculty member is given a fair amount of latitude in this regard. Beyond that area of use, every other use of online searching is done only with the prior understanding that the patron will have to absorb the entire cost of the search out of his own pocket or whatever source of funds he can supply. In this latter case, payment is required from the patron when the search is completed.

Through the years, online bibliographic services have become an integral part of our reference services. But at the same time, and perhaps fortunately, there has been no great demand for use of

the services beyond the classroom needs of our faculty. We are now in a process of revamping the way in which the costs of online searches are paid. Because the budget for the library has been reduced to a bare minimum, we have found that we will no longer be able to support searches even for classroom use. We are hoping to persuade the various departments to allocate funds for their faculties specifically earmarked for classroom related online searching. While we would like to continue to offer this service without charge, we are of the opinion that providing the service is our primary responsibility and that manipulation of funds to underwrite the services may be a responsibility which can be shared throughout the college. We do, in point of fact, support the attendant costs in terms of time involved, equipment used, and search aids required to provide these services.

In another area we are developing a pilot project which will involve certain students whose programs require a great deal of online searching to acquire their own passwords and accounts with DIALOG Information Services. This will circumvent the entire problem of collecting for searches done. In this way, we will move the billing process away from us and onto the student user.

And, finally, we are exploring the possibility of acquiring access to some other online services. At present, we are especially interested in BRS-After Dark. We anticipate that by using this service we will be able to reduce the actual cost of online searching for all our uses. We are also exploring several other specialized online services which we hope will provide answers to specific kinds of informational needs much more efficiently.

Online bibliographic retrieval is alive, well, and growing at Virginia Western Community College. The established foothold is sufficiently strong to overcome whatever problems that retrenchment may bring about for us.

Online Searching, A Short Course

By

Cathy Sabol

Cathy Sabol is Director of Learning Resources at the Manassas Campus of Northern Virginia Community College. Her presentation was intended for attendees who needed background information or a refresher course in the basics of online searching. A list of sources of information is included.

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Online Searching, A Short Course
Presented by Cathy Sabol, March 25, 1986

Prior to 1970, little public use was made of computerized online information retrieval systems; they were difficult and expensive to use and the available information was limited. Since that time, available online files have mushroomed. Currently, three kinds of information services are available:

1. Transaction-based services: shopping services, bartering, computerized classified, theatre ticket sales, plane reservations, and at-home banking. These introduce people to the systems.
2. Communication-based services: electronic mail, computerized bulletin boards, and on-line conferences.
3. Information-based services: the electronic library, everything from bibliographic research services to news services that offer the complete text of a document. It is this last online service that I will be describing this afternoon.

So that we will all have the same foundation of knowledge from which to discuss online searching, I will be defining the basic elements before getting into more details. Probably everyone in this room knows that a database is simply a collection of information in computer readable form. Within each database are a number of files, like individual volumes of a multivolume set. Sometimes the term "file" is used interchangeably with "database" although it is technically a subset. For the sake of simplicity, I will be using the broad term "database" to refer to both. Many databases are the compu-

ter-readable counterpart of printed indexing and abstracting services (e.g., Chemical Abstracts), but more recently bibliographic databases have been developed which are available only in computer readable form, with no printed equivalent available for purchase (e.g., Ageline and Robotics Information Database). What is contained in a database? It may include references to journal articles, technical reports, patents, books, conference papers, annual reports, trade publications, news and magazine articles, government documents, dissertations, statutes, and laws. Publicly available online information sources tend to be predominantly U. S. produced, scientific, English language materials and are limited in time, mainly covering publications since 1965. A document's existence in a database does not mean it is exhaustive or useful. It may be biased for ideological, political, or other reasons.

Databases are produced in various sectors of the economy:

1. Public: professional societies and associations
2. Private: Predicasts, Dow Jones
3. Government: NLM, NAL

Database producers may also provide computer access to the databases; however, typically databases created by the producers are leased to organizations known as search service vendors which support the computer services and the searching software and which usually pay royalty fees to the database producer for the amount of time the database is in use.

Who are the major search service vendors? The three major information-based bibliographic database vendors are: BRS (Bibliographic Retrieval Services based in Latham, NY), DIALOG (in Palo Alto, CA), and SDC Information Services (in Santa Monica, CA). Other vendors

include Dow Jones News Retrieval Service (with the most online users), Mead Data Central's Information Bank (full text of newspapers and wire services), WESTLAW (supplying law databases), and WILSONLLINE (provider of Wilson printed indexes). Well known foreign online services include ESA (Italy), Questel (France), and Data Star (United Kingdom). The most frequently used home online services include Compuserve (based in Columbus, Ohio and having the second largest number of users), and The Source (in McLean, Virginia).

The vendors have developed instructions or commands for searching known as search protocol. These commands vary slightly from vendor to vendor and even database to database, so to learn one search protocol does not make the searcher fluent in all systems. The vendors usually receive databases from the database producers on magnetic tapes which are loaded into the vendor's computer system. Processing the tapes includes generating indexes and various access points to the database. The same database may be leased to more than one vendor, so you may find overlap in coverage between DIALOG and BRS, for example. There may also be differences in the way the data are formatted and the indexes structured as well as how the database is searched.

Most vendors maintain output or printing capability at their sites, so users needing a large number of records from a search have the option of printing them at the vendor's computer site (known as offline printing) and having them mailed.

The vendor's computer monitors the amount of time that individual terminals and specific searchers are connected to the system (by use of unique security codes and passwords), how much time is spent searching each database (different databases charge different royal-

ties which are passed on to the user), and the amount of offline printing is done. Some vendors also charge so much per "hit" or citation displayed by the searcher.

Most connections to search service computer systems are made through telecommunications networks known as "value-added networks," or VANS. VANS most commonly used are TYMNET, TELENET, and UNINET. To use one of the networks, the searcher makes a telephone call to the computer at the nearest access point (or network node) and connects the telephone to the computer terminal. Charges for the use of the network are billed by the search service vendor.

The final link in the information network is the searcher who could be a librarian (usually acting as intermediary to a patron's request) or, thanks to search helper software, end users themselves (e.g., an executive in an office, a student in a dorm room, or you at home). The search process begins with a search strategy, much like a research strategy using printed sources, to be keyed in to the appropriate search system and the database most likely to satisfy the information need. The new software packages such as Search Helper and Wilsearch guide even the most inexperienced searcher through the protocol by the use of menus which ask questions defining each step.

What does a searcher need in order to get this far? A computer communications network consists of the following pieces:

1. Terminal - either a "dumb" terminal such as a Decwriter or a video display terminal (VDT or CRT) or a "smart" terminal (i.e., one with a microprocessor and disc storage) such as a PC.
2. Modem - (actually an abbreviation for modulator-demodulator, which is what it does, i.e., converts signals to send over phone lines of to be received by the computer). It is connected to the terminal and to

a telephone. It can be an acoustic coupler or a direct connect. The speed with which a modem transmits signals is known as baud rate. The most common rates are 300 and 1200 baud which translate loosely into transmission speeds of 30 characters per second and 120 cps. Although 300 baud modems are less expensive, 1200 baud makes more sense if you are paying an information utility. Likewise, a direct connect modem is more appropriate to use with 1200 baud so that the transmission is not garbled. There is also a 2400 baud rate available now, but not all vendors are transmitting at that speed yet.

3. Telecommunications networks - the VANS we discussed earlier, to handle data transmitted to and from computers, makes use of computers located far from the searcher (e.g., California) an inexpensive activity. They differ in choice of online services (DIALOG even has its own VAN, DIALNET), connection price, and reliability.

4. Communications software - necessary if using a microcomputer for searching because it instructs the PC to save data appearing on the screen so you can review it or print it out later.

5. A dedicated phone line - nice to have, but not necessary.

So you're ready to search. Don't let people scare you into thinking that it's an exotic or difficult process. Like anything else, the more complex searches require more practice and expertise, but anyone with thirty minutes training can do an adequate simple search. What are the steps?

1. Connecting (logon). This connection procedure itself has several steps:

a. Select telecommunication network (TYMNET, TELENET, etc.) through which service is accessed.

b. Specify terminal characteristics (i.e., baud rate, line length)

c. Select online service (BRS, DIALOG)

d. Identify user (password, security code)

e. Review presentation by computer of online service news (e.g., free database searches, new databases, non-functioning databases) or bypass this step.

2. Selecting a file to search.

3. Performing the search (using appropriate protocol).

4. Printing out the results.

5. Disconnecting (logoff). Depending on your needs and your terminal, steps 4 & 5 might be reversed.

Your resulting search might look like this (show transparency and explain parts of printout). But the real worth of online searching is the ability to combine divergent terms which cannot be readily combined in a manual search. The process by which this is done is known as Boolean logic and uses "and," "or," and "not." (Show Venn diagrams to explain Boolean logic).

What costs do you need to consider in starting up this online service? Direct costs (i.e., those costs incurred regardless of the amount of searching you do) include:

1. the equipment mentioned earlier (a minimum of a dumb terminal and an acoustic coupler)

2. perhaps staff wages, if you need to factor in the time spent in learning and using this new service

3. training courses, travel, practice time, manuals, user's guides, journal subscriptions on searching without which the staff cannot do an adequate job of searching

4. connect hour charges, telecommunications charges, offline and online print charges, royalties to the databases
5. computer terminal maintenance, printer paper/ribbons/print wheels
6. publicity

Indirect costs resulting from well-done online searching include:

1. increased interlibrary loans
2. new subscriptions to journals
3. additional reference books not covered online but complementary to online (such as Ward's Business Directory)

How do you pay for all of these costs and justify the existence of online services, especially in a small library? It may take a little creative financing (we started out with book/bake sales to raise money for our start-up), but there are means. In 1977 a number of studies reported that in general online searching was less costly than manual searching. That may still be true in some instances, but pricing is still evolving and printed products are no longer subsidizing the online products. Current alternatives in pricing now include prepaid subscriptions, payment for relevant citations only, different rates for printing full or partial citations, multitier pricing for subscribers and non-subscribers, and consortium memberships.

It is also possible to eliminate little used print sources and use the released funds to finance a variety of searches in different data bases. Chemical Abstracts is a good example of this. If the total cost per year of online searches to Chem Abstracts is less than a subscription to the hard copy, then the library is justified in providing only online service. However, in a situation such as this,

the library could not justify charging patrons for online access to the resource. Only if both the online and hard copy are available for use would charging for services not violate the principle of free access to information. But the question of whether to charge, to subsidize, or not to charge patrons for online services is still a burning issue and is being debated in another session.

Another way to hold down costs initially is to subscribe to the major vendor's limited services: DIALOG's Knowledge Index and BRS' After Dark or Brkthru services. These offer fewer files and must be used during non-prime time (i.e., 6 PM - 4 AM), but the savings are tremendous. For example, to search the least expensive file, ERIC, on BRS full service would cost you \$36.00/hour. But using BRS' Brkthru would only be \$17.50/hour, and its limited After Dark service only charges \$6.00/hour.

Another possibility is to consider subscribing to the popular transaction or communications based services mentioned earlier (The Source, CompuServe, or Delphi). However, these may not cost substantially less and probably will not add significantly to your academic resources (although at least one has an online encyclopedia).

What are the advantages of online searching? These may help you to justify its addition to your resources:

1. Speed -- faster than manual searching
2. Comprehensiveness -- access to more information sources than even large libraries can support in print form. The only limit is that few date before 1960 or 1970.
3. Currentness -- online sources often are updated before their published counterparts are printed and distributed. Many are updated daily.

4. Flexibility -- the interactive nature of online searching permits access to more combinations and more points of reference. You can search by document types, publication dates, language, journal name, etc.

5. Convenience -- can be conducted anywhere there is an electrical outlet and a telephone (with a small portable terminal). We used a pay phone in the hall for a demo of NEXIS once.

6. Cost effectiveness -- although this is still being debated, an indepth online search can be conducted at a lesser cost in terms of man-hours than an equivalent manual search of printed sources.

7. And it's fun!

If you do get into online searching, what impact can you expect it to have on library operations?

1. New techniques to be learned and maintained by the staff

2. Additional equipment requirements

3. Impact on library staff (increased workload from new service)

4. Charging for online services (a consideration for typically free services)

5. Record keeping (statistics and cost records must be maintained)

6. Marketing and promotion (departures from traditional services always need advertisement)

7. Impact on other library services (acquisitions, circulation, and interlibrary loan affected)

8. Increased patron expectations (or misunderstanding of online capabilities)

So you've decided to implement online services anyway. How do you stay current? Online information is in a perpetual state of

change as evidenced by the graphs we looked at earlier. Daily new databases go online, database structures are changed, search protocol is simplified or modified. You must read and attend training sessions (many of them free) in order to keep up. Anne Caputo has already mentioned what's on the horizon for online searching: full text, value added services, gateways and networking, downloading and post processing. Now's the time to catch up before you get left behind.

SOURCES OF INFORMATION

Borgman, Christine et al. Effective Online Searching: A Basic Text. New York: Marcel Dekker, Inc., 1984.

Goldmann, Nahum. Online Research and Retrieval With Microcomputers. Blue Ridge Summit, PA: Tab Books, Inc., 1985.

Hoover, Ryan E. (ed.). The Library and Information Manager's Guide to Online Services. White Plains, NY: Knowledge Industry Publications, Inc., 1980.

Lee, Joann H. (ed.). Online Searching: The Basics, Setting, and Management. Littleton, CO: Libraries Unlimited, Inc., 1984.

Meadow, Charles T. and Pauline A. Cochrane. Basics of Online Searching. New York: John Wiley and Sons, 1981.

Proceedings of the National Online Meetings (sponsored by Online Review, The International Journal of Online Information Systems). Medford, NJ: Learned Information, Inc., dates vary (6th = 1985).

Stone, M. David. Getting On-Line: A Guide to Accessing Computer Information Services. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1984.

End User Services and Training in the
Academic Environment

By

Christina A. Brundage

Christina Brundage is Life Sciences Reference Librarian at George Mason University. She was invited to attend our conference to lend expertise from a university environment where online searching is performed on a much larger scale. In addition to participating in our panel on paying for online searching, she made a small group presentation on end user services. Community college librarians who are exploring end user training will be interested in this detailed, informative explanation of end user options. A bibliography on the subject is included.

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END USER SERVICES AND TRAINING IN THE ACADEMIC ENVIRONMENT

INTRODUCTION

Two factors have led to the establishment of patron conducted online bibliographic search services in academic libraries. First is the availability of systems geared to the inexperienced and infrequent searcher. These are known as "user-friendly" systems, and are marketed to the home computer operator, but have an appropriate place in the library as well. The second factor is the desire of librarians to help their patrons learn to work more independently as information researchers. Just as we teach students and faculty to use such tools as Psychological Abstracts or CIE, we are beginning to offer the direct use of electronic counterparts of traditional print sources. The patron who conducts an online bibliographic search for him- or herself is called an end user searcher, as opposed to the librarian who conducts a mediated search for a patron. There are several considerations to explore when offering an end user service in the academic environment. They include the availability of appropriate systems and databases, costs of system access, changes in staffing, equipment, appropriate placement and hours of operation, increases in demand on other library services, how to evaluate the service, and degree of library investment in training end users. This paper will explore each in turn, and offer various alternatives for anticipating and heading off potential problems when beginning to serve end users.

SETTING UP AN END USER SEARCH SERVICE

Librarians will find a proliferation of systems available today which claim the advantage of user-friendliness. Some aids to the end user, such as Easy-Net and In-Search, are classified as "front end" software, and consist of packages which access the familiar Dialog or BRS database systems without requiring the user to be familiar with protocol such as dialing the telephone call or connecting to the system. The user of a front end system employs natural language rather than thesaurus terms, does not need to formulate Boolean strategy, and may not even have to select an appropriate database. The front end software performs the function of choosing a database, translating simple commands into the language understood by Dialog or BRS, and executing the search. Thus these software packages perform some of the tasks of a librarian intermediary. For further discussion of front end systems, see Hawkins, 1985.

Two of the major online bibliographic systems have produced their own user-friendly systems designed for the end user. Dialog has Knowledge Index and BRS has BRS After Dark and BRS Brkthru. These systems have varying degrees of user-friendliness and each carries a subset of the databases from the parent system. While a searcher will not find all the BRS databases available on BRS After Dark or Brkthru, the databases carried on these end user systems are as complete as those searched on the main BRS system. Both Knowledge Index and BRS After Dark are available only in the evening and weekends; BRS Brkthru is available during the daytime also. For more information about these systems see Ojala, 1983 (Knowledge Index); Janke, 1983 (BRS After Dark); and Hook, 1986 (BRS Brkthru).

A change is now underway in information retrieval that might alter the way all searchers, whether librarians or end users, access bibliographic databases. This is CD ROM, which must have a brief mention within the context of this paper. With CD ROM technology, the database is stored in-house and users do not have to communicate over telephone lines to access the bibliographic

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information they seek. This eliminates telecommunications charges and opens up new possibilities for end user access. Three recent articles explaining CD ROM and related technology are Carney, 1985; Herther, 1985; and Murphy, 1985.

The librarian, then, must research the systems and software now available, match capabilities with his or her users' needs, and choose accordingly. Because systems and software are changing constantly, reading professional journals, conferring with colleagues, and contacting company representatives are essential in coming to an appropriate decision.

What will access to an end user system cost? There are wide variations in the expense involved in offering such a service to library patrons. Some systems have a start up fee, and a monthly minimum, as well as charges for online time. Other systems charge flat fees for searches with a predetermined number of citations. There are reduced cost plans available for those libraries which can guarantee a certain number of searches per year.

The cost of equipment, thesauri, and supplies must be considered. Some end user systems require no more than the terminal or pc with modem used by librarians to conduct searches. Others, particularly front-end systems or CD ROM, may require more elaborate equipment.

How a library plans to finance end user service may take various forms. Some libraries pass on all costs to the user. This is easy to do with certain systems, because cost is either predetermined per search or is stated at the end of each search. Some systems, however, require a bit of mathematical juggling because they do not indicate actual costs after each search. Subsidizing searches is an alternative to full cost recovery, and will increase use of the service. Some libraries have a two-tiered system, with one price for more expensive databases, and another price for less expensive databases. Other libraries charge a flat fee per five minutes or twenty minutes of online time. And some libraries offer the service free of charge to their patrons. Fees charged (or not charged) for the end user service should be in proportion to fees for mediated searches, and thus reflect the relative value of each service.

A major consideration in any library is how a new service will be staffed. The end user literature reveals several options for staffing. Some patron conducted search services are set up so that a librarian must be in attendance while patrons are searching. These librarians might have had to shift their schedule to accommodate the night time and weekend hours of operation of user friendly systems. Other libraries staff their service by locating the terminal in the reference room and adding its oversight to the duties of the reference librarian on the desk. There are drop-in services which require continuous staffing, and by-appointment services which allow the library to know in advance which hours need to be committed to staffing the terminal. When choosing a staffing pattern, needs of the individual library and its patrons are uppermost considerations. The present traffic at the reference desk, the anticipated number of end user searchers, the current schedule of reference librarians must be considered.

Whether or not there is a librarian in attendance at the end user service is partially dependent on the system chosen. The library must determine exactly how easy the system is to use unaided. Some systems are designed to be used by patrons with no knowledge of search technique, protocol or strategy; other

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systems require prior training; many systems fall between these two categories. If patrons seem able to encounter difficulties when using the system, there are two alternatives to staffing. First, a librarian can be scheduled to help operate the system at all times that it is available to patrons. Alternatively, if the service cannot be continuously staffed, librarians can offer training sessions to familiarize patrons with the special language and requirements of the system. In either case, there will be demands made on staff time to implement end user searching.

Whether or not developing such a service adds to the overall workload of the reference department has not been answered. There may be a corresponding decrease in librarian-mediated searches, or an increase in the number of patrons reached by online searching in general.

Location of the service can also be correlated with type of system. Some systems are meant to be set up in the reference room, available at any time, with no concern as to logging on or time spent online. Most systems require interaction between the patron and librarian, however. This interaction could be as brief as a short reference interview or as long as it takes the patron to transact a complicated search. The service should not be placed where it will disturb other patrons, particularly in regard to the amount of instruction necessary to complete a search and the noise made by the printer. Electricity and phone lines are both essential to most systems. Money may be collected, and security of both cash and the equipment are considerations in placement of the service.

Publicity for the new service can be accomplished in many ways. A flyer and/or poster can be distributed, faculty informed, referrals made at the reference desk, students apprised during bibliographic instruction sessions and via the college newspaper. If the service is well received, word of mouth may be the best means of publicity.

Demand for other library services will rise if more patrons are doing online searches. The periodical collection will be more heavily used. Interlibrary loan will witness an increase in requests. The entire reference service, from mediated searches to reference desk, may be affected.

Beginning a new service as a pilot project is an excellent method to gauge user demand and satisfaction, as well as determine effects on the library as a whole. Offering free end user searches for one semester on a trial basis will probably allow the library to see if the service is viable. Users can be polled to find out if they are pleased with the service, whether they would like further training in its use, or if they would be willing to pay a fee for the service. Be warned, however. Once started, a popular service is difficult to withdraw without creating adverse publicity for the library.

Evaluation methods include surveying users at the time of the search. Patrons are generally pleased with the mechanics of creating a bibliography in a short time with the use of a computer, so this may not be an entirely accurate measure of the actual worth of the search. Calling patrons after they have had time to evaluate the bibliography, find the articles (or not find them!), and write the term paper, may lead to a more thoughtful evaluation of the appropriateness of the service.

END USER EDUCATION

Interpretation of patrons' evaluation may lead some libraries to offer training sessions or presearch counseling sessions if they had not offered such services before. Exactly what kind of an introduction an end user should have to a user friendly system must be determined at each individual library, taking into account types of patrons, type of system, and facilities available for training sessions. Perhaps all a patron needs is a worksheet to fill out before a search, leading him or her through the intellectual steps necessary before going online. Such steps include a thoughtful statement of the topic, breaking down the topic into its major concepts, translating those concepts into thesaurus terms if appropriate, and ways of broadening or narrowing the topic. Or, a presearch counseling appointment with a reference librarian may be more appropriate. Patron and librarian would discuss the topic and strategy much as they would in an interview before a librarian conducted search. Information would be given on appropriate databases and relevant thesauri, search logic, and command language of the system.

Another option in end user education is the training session. These sessions may be part of a regular bibliographic instruction session or evolve as separate classes. They may be general in terms of the end user system employed with no particular subject emphasized, or they may be on specific disciplines such as science, or specific databases such as Medline. The session may be demonstration only, or include hands-on time in a laboratory setting. Handouts can be prepared specifically tailored to the system employed for the end user search service, as well as specific to any discipline or database emphasized.

In such a session, students or faculty should become familiar with several things. They should learn what a bibliographic database is and is not. For example, they should not expect, in most cases, to receive the actual article, just a bibliographic citation with or without an abstract. They should learn what databases relevant to their needs are available. The librarian should emphasize what kinds of topics are appropriate for end user searches, what topics are better searched manually, and what types of topic should be referred to a librarian searcher. The logical steps taken by a searcher before going online should be outlined, reinforced perhaps by a worksheet designed to take the searcher through those steps. Basic system commands and capabilities should be outlined, as should scope and idiosyncrasies of pertinent databases.

CONCLUSION

Libraries are experiencing a transition from heavy reliance on print sources to expanded use of electronic media for information access and storage. Rapid changes in electronic formats make predictions a risky business, but it seems certain that patrons will increasingly request the availability of user friendly systems in their libraries. In offering any new library service, we try to prepare for expected outcomes, both positive and negative. It is impossible to foresee all the ramifications of the establishment of an end user search service, but this paper has outlined some of the considerations to be taken into account when planning for such a service.

BIBLIOGRAPHY

- Carney, Richard. 1985. "InfoTrac: An Inhouse Computer-Access System." Library Hi Tech 3(2): 91-94.
- Dodd, Jane. 1985. "A Comparison of Two End User Operated Search Systems." ERIC Report ED 255 224.
- Friend, Linda. 1985. "Independence at the Terminal: Training Student End Users to Do Online Literature Searching." J Acad Lib 11(2): 136-141.
- . 1986. "Identifying and Informing the Potential End-User: Online Information Seminars." Online 10(1): 47-56.
- Halperin, Michael and Ruth A. Pagell. 1985. "Free 'Do-It-Yourself' Online Searching...What to Expect." Online 9(2): 82-83.
- Hawkins, Donald T. and Louise R. Levy. 1985. "Front End Software for Online Database Searching: Part 1: Definitions, System Features, and Evaluation." Online 9(6): 30-37.
- Herther, Nancy K. 1985. "CD ROM Technology: A New Era for Information Storage and Retrieval?" Online 9(6): 17-28.
- Hook, Sara Anne. 1986. "BRS/Brkthru: A Happy Medium." Online 10(1): 97-101.
- Hunter, Janne A. 1984. "When your Patrons Want to Search: the Library as Advisor to Endusers...A Compendium of Advice and Tips." Online 8(3): 36-41.
- Janke, Richard V. 1983. "BRS/After Dark: The Birth of Online Self Service." Online 7(5): 12-29.
- . 1984. "Online After Six: End User Searching Comes of Age." Online 8(6): 15-29.
- . 1985. "Presearch Counseling for Client Searchers (End-Users)." Online 9(5): 13-26.
- Lyon, Sally. 1984. "End-User Searching of On-line Databases: A Selective Annotated Bibliography." Library Hi Tech 2(2): 47-50.
- Murphy, Brower. 1985. "CD-ROM and Libraries." Library Hi Tech. Consecutive Issue 10: 21-28.
- Ojala, Marydee. 1983. "Knowledge Index: A Review." Online 7(5): 31-34.
- Tenopir, Carol. 1986. "Databases on CD-ROM." Library Journal 111(4): 68-69.
- Trzebiatowski, Elaine. 1984. "End User Study on BRS/After Dark." RQ 23(4): 446-450.
- Ward, Sandra N. and Laura M. Osegueda. 1984. "Teaching University Student End-Users about Online Searching." Science & Technology Libraries 5(3): 17-31.

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The Right Modem

By

Paul A. Parker

Paul Parker is a Microcomputer Programmer Specialist working for Computing and Information Systems at Northern Virginia Community College. He was present at the Conference to answer technical questions and also made a small group presentation about microcomputers and modems. In his paper, Mr. Parker describes how a modem works, discusses several common problems, and gives advice on purchasing the "right" modem. A computer drawing of a microcomputer system follows his paper.

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The Right Modem
by

Paul A Parker
Microcomputer Programmer Specialist
Northern Virginia Community College

MODEM is an acronym for Modulator/DEModulator, and is mostly used to communicate with other computers located some distance away. In this article I will discuss what a modem is, how a modem works, the problems encountered when installing a modem, and some things to look for when buying one.

Modems come in a variety of forms, but they all perform the same action. They translate the computer's digital pulsed signal to a analog audio signal that can be transmitted over a telephone wire. You might ask why the conversion is necessary? The conversion from digital to analog must be done for signal integrity.

A digital signal has sharp transitions from a positive voltage to a negative voltage known as a square wave. This square wave signal will become distorted as it travels down a length of wire. The transitions will become ragged and electrical noise will interfere with the wave. After a few hundred feet the signal will bear no resemblance to the original signal. When an analog signal is sent down the same length of wire, smooth transitions from a positive voltage to a negative voltage are not interfered with as greatly as a square wave, and the integrity of the signal is maintained.

However, there is more to the conversion process than just smoothing the rough edges of a digital signal. Each pulse of the digital signal is transformed from a square wave to a series of

smooth analog transitions, or sine wave, by a process known as frequency modulation. The resulting sine wave is a tone, much like the dial tone when you pick up a telephone. The difference is the pitch or frequency of the tone. The tones used by the modem are slightly higher and are constantly shifting between two frequencies, giving them a very grating sound.

Even still, there is much more to modems than a simple conversion. A modem should eliminate forbidden frequencies, minimize redundancy, provide some form of error detection, and in the event of an error, ask for a retransmission of the data received to eliminate errors by comparison, all of which is transparent to the user.

How a modem works depends greatly on the speed of signal transmission. The American National Standards Institute or ANSI, has accepted several standards of communication for modems. For simplicity I will discuss only two, Bell 103 and Bell 212A. Bell 103 is the standard for 300 bits transmitted per second, more commonly referred to as baud. This standard provides for full duplex, or communication in both directions at once. This is accomplished by using two sets of frequencies for communication. When signals are traveling one direction on the telephone line, they won't interfere with signals traveling in the other direction.

The Bell 212A standard is for 1200 baud full duplex. It uses the same frequencies as the Bell 103 standard, but the manner in which the signals are created is different. They are

created by a process known as phase shifting. The frequency does not really change, but the process makes it appear as if it does. There is an older 1200 baud standard, Bell 202, which only provides for half duplex, or communication in one direction at a time. This early standard used frequency modulation and only one set of frequencies limiting the potential of early 1200 baud modems.

Modems are very reliable, but they do suffer a few initial installation problems. The program to run the modem may not work correctly. The cable between the computer and the modem may not be the right one, and the phone line may have too much noise.

The program not running right may be caused by many different reasons. Most programs must be configured to run with the different computers and modems on the market. Therefore, the program must be installed to that particular system.

The cable problem can be cured if you buy the cable with the modem and be sure to tell the vendor what computer it will be connected to. There are usually two types of connectors on a computer, parallel and serial. All modems require a serial connector, and most require an RS-232C serial connection. Some of the parallel connectors look similar to the serial connectors, so consult your computer manual to find out what is where.

As far as the phone line goes, the hissing that you hear in the background is referred to as noise and greatly affects the quality of the modem signal. If you are having trouble after checking the program and the cable, call the telephone company

and notify them, and that you are using the phone line for a computer modem. They will be happy to check the quality of the line, but remember if there is nothing wrong with the line they will charge you, so be sure to check the rest of the system first.

When buying a computer modem, there are a number of things to consider. What will be the primary purpose in using the modem? Will it be used to connect to an on-line database or mainframe as a terminal, or will it be used to send and receive large amounts data to and from another computer? What computers and programs are compatible with the modem? How often will the modem be used, and to what extent? If the modem is a fast one, can it be used at slower speeds? What kind of warranty does it have? If the modem fails, is the repair done locally, or will the modem have to be sent across the country to be fixed? If you have problems with the modem, will the vendor assist you? Are there any training sessions on using the program and modem?

Determining the right modem to buy can be difficult, but keep in mind the purpose for which you will be using the modem. If you are using the modem just for short periods of time it might be desirable to buy a slower modem since ^{Some}~~most~~ on-line databases charge less for the slower speeds. If you intend to transfer large amounts of data, a faster modem is necessary.

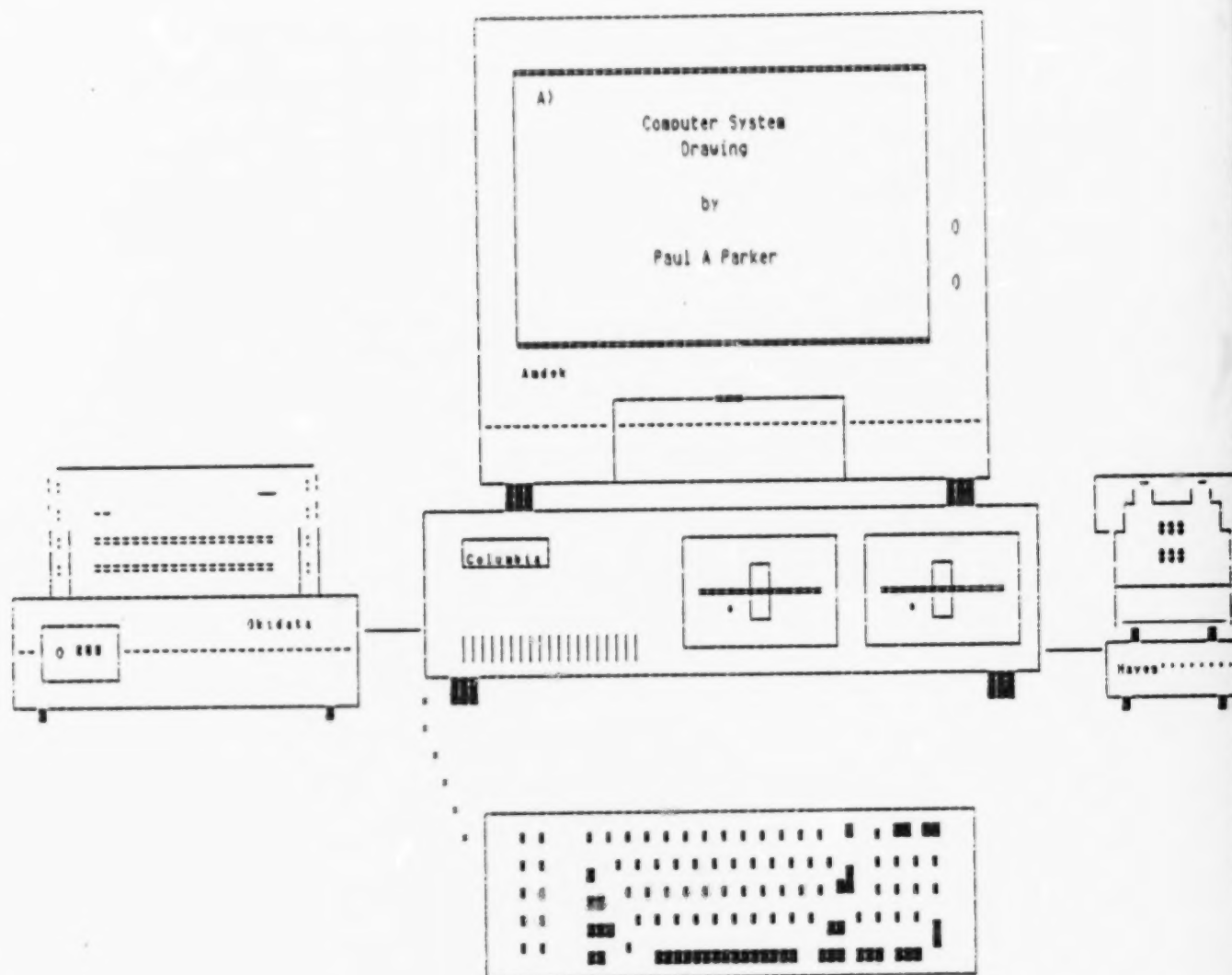
In most cases you will want a 1200 baud smart modem. Smart implies that it has self testing capabilities, auto-answer, auto-dial and redial, full or half duplex, and error correction

circuitry. Also, you may want a modem with a speaker to hear if the line is busy or if the other end is ringing, and it would be nice to get a program and cables with the modem, just to be sure they work together.

You definitely want vendor support should any thing go wrong with the modem. If the service is performed at the factory, ask the vendor if they will provide a loaner modem while yours is being fixed. Training is not usually necessary, but a good manual helps. The vendor will usually be happy to answer any questions you might have.

There is one final consideration: should the modem be internal or external? If the modem is internal, you will be taking away an extra expansion slot needed for other options, and some internal modems have no speaker, but if the computer is only going to be used for the modem, then an internal might be preferable.

External modems, on the other hand, are highly transportable and will work with a greater variety of computers. For example: an internal modem for an IBM computer might work on a Compaq computer, but it will not work on an Apple computer, however, an external modem would probably work on all three. There are some drawbacks to external modems. They cost more, they take up desk room and since some computers do not have a serial connector, they will need a serial port expansion card. When it comes to modems, my best advice is to first decide what you need, and then shop around for good service and a good price.



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CONFERENCE RESOLUTIONS

Presented By Dr. Gloria Terwilliger
Director of Learning Resources, Alexandria Campus,
Northern Virginia Community College

1. Online Database Searching has been an integral part of library reference work for over fifteen years. The amount of accessible information increases daily, with an estimated 40 million searches in 1985. Reference and bibliographic information, directory information, numeric data, and an increasing amount of full text data bases are available instantaneously. It is recommended that online searching be subsidized for faculty and students, and that the basic costs be built into each library's budget.

2. A Professional Development Project

Training for librarians in online database searching is vital to achieve the greatest value from this powerful research tool. It is recommended that the Virginia Community College System telecommunications technology be used for workshops in online searching as one of the means of continuing education.

The consensus of those in attendance at the session at which these resolutions were presented was that they be endorsed and that they represent an appropriate outcome of the conference

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VENDOR SERVICES DEMONSTRATED AT CONFERENCE

DIALOG Information Services, Inc.
Marketing Department
3460 Hillview Avenue
Palo Alto, CA 94304
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DIALOG provides extensive and varied subject coverage found in 220 databases. The system is available 22 hours every week-day with additional hours on Saturday. They hold well organized and frequent training sessions throughout the United States and abroad. With DIALOG one has the ability to "pay as you go" as they do not require any start-up or minimum fees.

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1200 Route 7
Latham, New York 12110
1-800-227-5277

BRS/AFTER DARK provides computerized information services during convenient evening and weekend hours at a fraction of the cost of a full service vendor. The system is user friendly and is quite compatible for end user searching. There is a \$75 one time subscription fee and a \$12 minimum monthly charge.

KNOWLEDGE INDEX
Dialog Information Services
Marketing Department
3460 Hillview Avenue
Palo Alto, CA 94304
1-800-528-6050 ext. 415

KNOWLEDGE INDEX is a convenient, easy to use, low cost service. There are no monthly minimums as you pay only for the time you use at the rate of \$24.00 per hour. Institutional billing, previously unavailable, is now routine.

WILSONLINE

The H. W. Wilson Company
950 University Avenue
Bronx, New York 10452
1-800-367-6770

WILSONLINE is an online version of the H. W. Wilson Publications. These indexes are heavily used as their subject matter and depth of coverage are compatible with community college students' capabilities and their courses. The system, which can be accessed from 43 access points, is easy to use and is updated at least twice each week. There is a variety of payment options - one to four different subscription levels or "pay as you go."

WILSEARCH

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Bronx, New York 10452
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WILSEARCH is a software package formulating searches automatically and providing retrieval from any of the books and periodicals indexed annually in WILSON databases. There is a \$150 license fee for 12 months that entitles you to receive updated diskettes. There is also a charge for searches conducted. If no references are found, there will be no charge.

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Catalyst
Catalyst Information Center
250 Park Avenue South
New York, N. Y. 10003
212-777-8980

Catalyst Resources For Women (CRFW) - a database on womens' issues.

Chase Econometrics
Division of Interactive Data
Corporation
150 Monument Road
Bala Cynwyd, PA 19004
215-667-6000

Provides online economic and financial databases encompassing 70 economies around the world, regional economies and key industries.

Dow Jones News/Retrieval
Dow Jones & Company, Inc.
P. O. Box 300
Princeton, New Jersey 08543
1-800-257-5114

Dow Jones News/Retrieval provides timely, comprehensive business and economic news and financial and investment information.

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ISI
Institute for Scientific Information
3501 Maraket Street
Philadelphia, PA 19104
215-386-0100

Provides information on several databases such as Social Scisearch, and Arts & Humanities Search. They have a new and expanded Online Education and Training Program.

News Net
945 Haverford Road
Bryn Mawr, PA 19010
1-800-345-1301

News Net offers more than 280 online services covering 35 industry areas. These services are provided by independent publishers and are updated regularly.

NTIS
National Technical Information
Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161
703-487-4929

NTIS makes many databases produced by federal agencies available to the public. These databases can be leased directly from NTIS or maybe searched online through one or more of the commercial online vendors.

Pergamon Info Line Inc.
1340 Old Chain Bridge Road
McLean, VA 22101
1-800-336-7575

Offers a computer-based online system, making available a unique range of databases from suppliers around the world.

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SDC
System Development Corporation
2500 Colorado Avenue
Santa Monica, CA 90406
213-820-4111

Through the Orbit Search Service comprehensive full text and bibliographic records provide worldwide coverage on a wide variety of subjects.

The Source
1616 Anderson Road
McLean, VA 22102
1-800-336-3366

The Source provides an array of services such as online shopping, airline schedules, movie and T.V. reviews, electronic mail, and UPI and AP news services.

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PROGRAM

VIRGINIA CONFERENCE ON ONLINE SEARCHING IN COMMUNITY COLLEGES

Objective: Instructional excellence through improved access to information.

March 24: 6:00-8:30 PM Pre-conference sessions for out-of-town VCCS visitors arranged on an individual basis.

March 25

8:30 Registration (outside Room CN125)

9:00 Welcome. Dr. Lois H. Smith, LRC Director, NVCC, Annandale (Room CN125)

9:05 Keynote Address. Anne Caputo of DIALOG Information Services

10:05 Coffee

10:30 Announcements and Introductions. Frances Bernhardt, NVCC Annandale (CN125)

10:40 Short Talks: Community Colleges and Online Searching

Dr. Gloria Terwilliger (NVCC, Alexandria Campus)

Lillian Berg (Chemistry Dept., NVCC, Annandale)

"Chemistry Students Use Online Searching"

Timothy Williams (J. Sargeant Reynolds C.C.)

Carolyn Hughes, Pat Thomas (Tidewater C.C.)

12:00 Buffet Luncheon (Faculty/Staff Dining Room, CF Bldg.)

1:30 Concurrent Sessions

1. Room CN125. Paying for Online Search Services. Panel Discussion.

Dr. Gen Sen Chu (NVCC, Alexandria), Don Hayes (NVCC, Loudoun)

John Welch (Virginia Western C.C.), Tina Brundage (George Mason Univ.). Moderator: Peggy Cocke (Germanna C.C.)

2. Room CN102. Short Course on Online Searching. Cathy Sabol (NVCC, Manassas)

2:45 Break

3:00 Information Potpourri. Demonstrations, special interest meetings, displays, brochures and other handouts, information exchange. See following page for details.

Information Potpourri 3:00-4:30 P.M.

DEMONSTRATIONS: (limit 10 people, already filled)

- 3:00-3:30 DIALOG Hands-On (Library CG302) Frances Bernhardt
and Marian Delmore, NVCC, Annandale
- 3:00-3:30 BRS/After Dark (Library 303A) Ruth Stanton and
Shirley Tildon, NVCC, Annandale
- 3:30-4:00 Knowledge Index (Library 302) Sylvia Rortvedt, NVCC,
Alexandria
- 3:30-4:00 Wilsonline (Library 303A) Christine Dixon and Patricia
Twilde, NVCC, Annandale
- 4:00-4:30 Wilsearch (Library 303A) Ellie England, NVCC,
Woodbridge

SPECIAL INTEREST PRESENTATIONS: (open to all, even if not
preregistered)

- 3:00-3:30 End-User Training (CN125) Tina Brundage, George Mason Uni
- 3:30-4:00 Equipment and Technical Problems (Microcomputer Lab.
CG406) Paul Parker, NVCC, Computing and Information
Systems

BROCHURES, HANDOUTS, INFORMATION EXCHANGE

Be certain to visit the library Reference Room to pick up brochures and folders on online search services and databases. We also have a table for exchange of library information on online searching and a table for exchange of library handbooks, pathfinders, bookmarks, and other library literature. The library is open from 10:30 A.M. to 7:30 P.M. today.

OTHER

Also you may be interested in visiting our LRC Microcomputer Laboratory CG406 (one floor above the library). The ERIC Microsearch disk on Library Instruction will be demonstrated from 4:00 to 4:30 for anyone who is interested.

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LIST OF COMMUNITY COLLEGES
REPRESENTED AT THE CONFERENCE

Blue Ridge Community College
Dabney S. Lancaster Community College
Germanna Community College
J. Sargeant Reynolds Community College
John Tyler Community College
Montgomery College (Maryland)
New River Community College
Northern Virginia Community College
Patrick Henry Community College
Tidewater Community College
Virginia Western Community College

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